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=> d his

     (FILE 'HOME' ENTERED AT 07:18:20 ON 01 MAR 2008)
     FILE 'CA' ENTERED AT 07:18:30 ON 01 MAR 2008
L1 111642 S RADIOWAVE OR RADIO WAVE OR RADIO(8A)(MHZ OR MEGAHERTZ OR MEGAHZ
          OR (MEGA OR M)(W)(HERTZ OR HZ) OR MHERTZ) OR RADIOFREQUENC? OR RF
          OR RADIO (2A)FREQUENCY
L2   1391 S L1(10A)(COHEREN? OR CONTINU?)
L3    116 S L2 AND (BIO? OR DNA OR TISSUE OR HUMAN OR CANCER? OR CARC? OR
          MALIG?)
L4     22 S L2 AND HARMON?
L5    157 S L2(10A)(TRANSDUC? OR TRANSEV? OR TRANSCEIV? OR OSCILLAT? OR
          OSCILAT? OR MODULAT? OR DEMODULAT? OR GENERAT?)
L6    278 S L3-5
L7    168 S L6 AND PY<2000
L8    146 S L7 NOT(SYNCHROTRON OR PLASMA COAT? OR CVD OR GEOLOGICAL AGE OR
          TOKAMAK OR NUCLEAR(1A) REACTOR)
L9    135 S L8 NOT(ION SOURCE OR LINEAR ACCELERAT? OR KLYSTRO! OR NUETRON R
          FABRY OR ELECTRON(W)(BUNCH OR LASER))
L10   108 S L9 NOT(GUNN OR FUSION OR MAGNETORESIST? OR DISCHARGE OR
          QUADRUPOLE OR DRIFT OR PHOTOACOUST? OR ATOM ALIGN? OR LIGHT
          DIFFRACT?)
L11   101 S L10 NOT(COLLIDER OR GRAFTING OR STORAGE RING OR CYCLOTRON OR ION
          PLASMA OR DYE LASER OR PAPER CHROMATOG?)
L12    77 S L11 NOT (NMR OR NUCLEAR MAGNETIC?)
     FILE 'BIOSIS' ENTERED AT 08:07:39 ON 01 MAR 2008
L13   146 S L12
     FILE 'MEDLINE' ENTERED AT 08:09:17 ON 01 MAR 2008
L14   121 S L12
     FILE 'INSPHYS' ENTERED AT 08:10:59 ON 01 MAR 2008
L15     2 S L12
     FILE 'INSPEC' ENTERED AT 08:11:42 ON 01 MAR 2008
L16   372 S L12
L17   357 S L16 NOT(AIRBORNE RADAR OR SAWS OR (SPACE OR OPTIC?)(W)COMMUNICAT?
          OR GALVANOMAG? OR VTOL OR PHOTODIODE OR ELECTROOPTIC?)
L18   321 S L17 NOT(PHOTONIC OR PHOTODETECT? OR OPTIC?(W)(CONVER? OR
          MODULAT?) OR OPTOELECT? OR (LIGHT OR SURFACE)(W)SCATTER? OR TV OR
          FADING OR SAW)
     FILE 'CA, BIOSIS, MEDLINE, INSPHYS, INSPEC' ENTERED AT 08:27:35 ON 01
          MAR 2008
L19   511 DUP REM L12 L13 L14 L15 L18 (156 DUPLICATES REMOVED)

=> d bib,ab l25 1-511

L19  ANSWER 48 OF 511  CA  COPYRIGHT 2008 ACS on STN
AN   133:283190  CA
TI   Continuous moisture determination of wood panel board products using the
     radio-frequency dielectric method
AU   Hanson, Colin
CS   Sensortech Systems, Inc., Santa Clarita, CA, USA
SO   Resin & Blending Seminar Proceedings, 2nd, Portland, OR and Charlotte,
     NC, United States, Oct. 29-30 and Dec. 10-11, 1998 (1999), Meeting Date
     1998, 63-69.  Editor(s): Bradfield, John. Publisher: Forest Products
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Society, Madison, Wis.
AB The use of radio-frequency instrumentation to continuously det. moisture content at various points in bio-composite manufg. processes is briefly described. Comparisons are made with alternative technols. and off-line lab. techniques. The accuracy limitations of all moisture measurement techniques and the overly optimistic claims made by companies in this field are recognized. No exaggerated claims are made; in fact, an attempt is made to lower expectations to a realistic level and encourage a more pragmatic approach to moisture problems. In addn. to providing a general overview, several application examples are illustrated with 2 specific case studies.

L19 ANSWER 77 OF 511 BIOSIS on STN
AN 1998:263803 BIOSIS
TI Thermophysiological responses of human volunteers during controlled whole-body radio frequency exposure at 450 MHz.
AU Adair, Eleanor R. [Reprint author]; Kelleher, Sharon A.; Mack, Gary W.; Morocco, Tamara S.
CS AL/OER, 8308 Hawks Rd., Brooks Air Force Base, TX 78235, USA
SO Bioelectromagnetics, (1998) Vol. 19, No. 4, pp. 232-245. print.
AB Thermoregulatory responses of heat production and heat loss were measured in seven adult volunteers (four women and three men, aged 21-57 yr) during 45-min dorsal exposures of the whole body to 450 MHz continuous wave radio frequency (RF) fields. Two power densities (PD) (local peak PD = 18 and 24 mW/cm2; local peak specific absorption rate = 0.320 (W/kg)/(mW/cm2)) were tested in each of three ambient temperatures (Ta = 24, 28, and 31degree C) plus Ta controls (no RF). No changes in metabolic heat production occurred under any exposure conditions. Vigorous increases in sweating rate on back and chest, directly related to both Ta and PD, cooled the skin and ensured efficient regulation of the deep body (esophageal) temperature to within 0.1degree C of the normal level. Category judgments of thermal sensation, comfort, sweating, and thermal preference usually matched the measured changes in physiological responses. Some subtle effects related to gender were noted that confirm classic physiological data. Our results indicate that dorsal exposures of humans to a supra-resonant frequency of 450 MHz at local peak specific absorption rates up to 7.68 W/kg are mildly thermogenic and are counteracted efficiently by normal thermophysiologic heat loss mechanisms, principally sweating.

L19 ANSWER 217 OF 511 INSPEC (C) 2008 IET on STN
AN 1993:4348968 INSPEC DN A1993-07-8750B-001
TI Physiological interaction processes and radio-frequency energy absorption
AU Adair, E.R.; Adams, B.W.; Hartman, S.K. (Yale Univ., New Haven, CT, USA)
SO Bioelectromagnetics (1992), vol.13, no.6, p. 497-512, 29 refs.
AB Because exposure to microwave fields at the resonant frequency may generate heat deep in the body, hyperthermia may result. This problem has been examined in an animal model to determine both the thresholds for response change and the steady-state thermoregulatory compensation for body heating during exposure at resonant (450 MHz) and supraresonant (2450 MHz) frequencies. Adult male squirrel monkeys, held in the far field of an antenna within an anechoic chamber, were exposed (10 min or

90 min) to either 450-MHz or 2450-MHz CW fields (E polarization) in cool environments. Whole-body SARs ranged from 0-6 W/kg (450 MHz) and 0-9 W/kg (2450 MHz). Colonic and several skin temperatures, metabolic heat production, and evaporative heat loss were monitored continuously. During brief RF exposures in the cold, the reduction of metabolic heat production was directly proportional to the SAR, but 2450-MHz energy was a more efficient stimulus than was the resonant frequency. In the steady state, a regulated increase in deep body temperature accompanied exposure at resonance, not unlike that which occurs during exercise. Detailed analysis of the data indicate that temperature changes in the skin are the primary source of the neural signal for a change in physiological interaction processes during RF exposure in the cold.

L19 ANSWER 218 OF 511 INSPEC (C) 2008 IET on STN
AN 1993:4347453 INSPEC DN A1993-06-7660E-008
TI Possibility of coherent emission in a cavity-free spin system
AU Belozerova, T.S.; Henner, V.K.; Yukalov, V.I. (JINR, Dubna, Russia)
SO Soviet Technical Physics Letters (July 1992), vol.18, no.7, p. 404-5, 5 refs.
AB It is well known that the appearance of coherent RF radiation in both molecular and solid-state oscillators is due to the presence of a cavity that provides feedback between the emitted radiation and the emitting system. This pertains to both CW and pulsed operation of the oscillators. The emission process is usually described with by the phenomenological Bloch equations, especially in the case of spin solid-state oscillators. Analysis of these equations shows that in the pulsed mode coherent radiation can arise only if the so-called radiation time T_R is shorter than the spin-spin relaxation time T2. The well-known condition on the threshold of initial polarization follows from the inequality $T_R<T2$. The authors show that a spin system can also emit coherently in the absence of a cavity, it can do so at times longer than T2. This effect can be produced either by additional external pumping or, even when there is no additional external pumping, by taking into account accurately the nonuniformity of the system of spins interacting with one another via dipole-dipole forces.

L19 ANSWER 232 OF 511 CA COPYRIGHT 2008 ACS on STN
AN 118:177644 CA
TI RF reference generation for the Ground Test Accelerator
AU Regan, Amy H.; Denney, Peter M.
CS Los Alamos Natl. Lab., Los Alamos, NM, 87545, USA
SO Conf. Rec. IEEE Part. Accel. Conf., 14th (1991), Volume 5, 2946-8
AB This paper describes the implementation plan for the radio-frequency (rf) ref. generation subsystem of the Ground Test Accelerator (GTA). The master oscillator and most of the required components of this subsystem have been acquired and tested. Hardware descriptions and test results are cited when available. Each GTA control subsystem requires a coherent, phase-stable signal from the rf ref. generation subsystem to regulate the rf field in its corresponding cavity of the accelerator. The rf ref. generation subsystem is configured in a star-distribution format, originating at a master oscillator that supplies three phases-coherent frequencies harmonically related to a fixed fundamental.

Phase-locked loops and Wilkinson splitters distribute these signals to many different output ports. VXI monitoring modules measure the stability of the signals being distributed. Any shift in phase of the rf reference signals from the ref. generation subsystem to each cavity-control subsystem will translate directly into phase errors between cavities. The allowed tolerance on the phase error for the ref. signals is +/- 0.15 degrees.

L19 ANSWER 296 OF 511 INSPEC (C) 2008 IET on STN
AN 1989:3272933 INSPEC
TI Long-term study of 435 MHz radiofrequency radiation on blood-borne end points in cannulated rats. I. Engineering considerations
AU Bonasera, S.; Toler, J.; (Bioeng. Center, Georgia Inst. of Technol., Atlanta, GA, USA), Popovic, V.
SO Journal of Microwave Power and Electromagnetic Energy (1988), vol.23, no.2, p. 95-104, 9 refs.
AB To study the effects of exposure to long-term, low-level radiofrequency radiation (RFR) on various physiological systems in a large population of rodents, a complete exposure facility was designed and constructed at the Georgia Institute of Technology. The major components of the facility included a set of circular, stacked, parallel-plate waveguides fed by slotted-cylinder antennas. The waveguides provided a TE10 mode, horizontally polarized field in which the maximal power density occurred midway between the parallel plates. The feed antenna and the parallel-plate waveguides generated a field that radiated outward and was uniform in the azimuthal plane. Thus, animals arrayed along the periphery of the plates were exposed to a uniform 1.0 mW/cm2 field (1.0 μs pulse width, 1 kHz pulse repetition rate, 435 MHz carrier). The facility transmitter provided four channels of 435 MHz RFR at 200 W average (continuous wave) or 5 kW peak (pulsed-wave) power

L19 ANSWER 307 OF 511 BIOSIS on STN
AN 1987:426848 BIOSIS
TI DIELECTRIC MEASUREMENTS FOR THE DESIGN OF AN ELECTROMAGNETIC REWARMING SYSTEM.
AU MARSLAND T P [Reprint author]; EVANS S; PEGG D E
CS MRC MED CRYOBIOL GROUP, UNIV DEP SURG, DOUGLAS HOUSE, TRUMPINGTON RD, CAMBRIDGE CB2 2AH, UK
SO Cryobiology, (1987) Vol. 24, No. 4, pp. 311-323.
AB The work described in this paper is intended to provide a basis for the design of a controlled rewarming system for cryopreserved tissues and organs using electromagnetic energy. For rapid rewarming (say, >10° C/min), the temperature distribution in the organ is effectively determined by the uniformity (or otherwise) of the power deposition, which is in turn controlled by the electrical properties of the perfused tissue. In this contribution, we describe the measurement system we have used to characterize the electrical properties of perfusates and perfused rabbit kidney tissue from -30 to +20°C. Measurements have been made on three perfusates using an open-ended coaxial probe sensor over a continuous range of radio and microwave frequencies covering 50 MHz to 2.6 GHz. Results show that the behavior of the electrical properties with increasing temperature is unfavorable at either end of the

frequency range investigated-either the power absorption has a positive temperature coefficient or the penetration depth is too shallow. However, there is a compromise frequency range, determined in part by the perfusate composition, where these factors are much less serious. In this frequency range, the electrical properties of the perfused tissue are dominated by the properties of the perfusate. Modifications to the perfusate composition, e.g., reducing the concentration of electrolytes by adding sucrose, can further improve the temperatue dependence of the electrical properties.

L19 ANSWER 310 OF 511 CA COPYRIGHT 2008 ACS on STN
AN 107:3397 CA
TI Radiofrequency (microwave) radiation exposure of mammalian cells during UV-induced DNA repair synthesis
AU Meltz, Martin L.; Walker, Kathleen A.; Erwin, David N.
CS Health Sci. Cent. San Antonio, Univ. Texas, San Antonio, TX, 78284-7800, USA
SO Radiation Research (1987), 110(2), 255-66
AB The effect of continuous-wave (CW) and pulsed-wave (PW) radiofrequency radiation (RFR) in the microwave range on UV-induced DNA repair has been investigated in MRC-5 normal human diploid fibroblasts. RFR exposure at power densities of 1 (or 5) and 10 mW/cm2 gave a max. specific absorption rate (SAR) (at 10 mW/cm2) of 0.39 W/kg for 350 MHz RFR, 4.5 W/kg for 850 MHz RFR, and 297 W/kg for 1.2 GHz RFR. RFR exposures for 1-3 h at 37°, in either continuous-wave or pulsed-wave modes, had no effect on the rate of repair replication label incorporated into preexisting UV-damaged DNA. RFR exposures (PW), with a const. medium temp. of 39° at 350 and 850 MHz during the repair period after UV damage, also had no effect. Assay for induction of repair synthesis by RFR exposure alone in non-UV irradiated cells was neg. for the 350-, 850-, and 1200-MHz CW and PW RFR at 37° and the 350- and 850-MHz PW RFR at 39°. RFR does not induce DNA repair under these exposure conditions. In preliminary expts. with the tissue culture medium maintained at 39° and RFR exposures (PW) at the frequencies of 350, 850, and 1200 MHz, no effect on incorporation of [3H]thymidine into DNA undergoing semiconservative synthesis was obsd.

L19 ANSWER 314 OF 511 INSPEC (C) 2008 IET on STN
AN 1987:2995346 INSPEC
TI Experimental study of the controllable microwave troughguide applicator
AU Rappaport, C.M.; Morgenthaler, F.R.; Lele, P.P. (Dept. of Electr. Eng., MIT, Cambridge, MA, USA)
SO Journal of Microwave Power and Electromagnetic Energy (1987), vol.22, no.2, p. 71-8, 9 refs.
AB Electromagnetic heating has been shown to be an effective method of treating cancer in humans. The authors present a new class of focussed electromagnetic hyperthermia applicators to increase penetration depth and to improve control over the radiated field pattern. Unlike currently available RF and microwave applicators, this new troughguide applicator provides a continuous aperture distribution with built-in deposited

power monitoring.

L19 ANSWER 366 OF 511 INSPEC (C) 2008 IET on STN
AN 1984:2296294 INSPEC
TI A high-power network analyzer for measuring the RF power absorbed by biological samples in TEM cell
AU Juroshek, J.R.; Hoer, C.A. (NBS, Boulder, CO, USA)
SO IMTC/84. IEEE Instrumentation and Measurement Technology Conference Proceedings, 1984, p. 78-9 of xviii+158 pp., 0 refs. Published by: IEEE, New York, NY, USA Conference: IMTC/84. IEEE Instrumentation and Measurement Technology Conference Proceedings, Long Beach, CA, USA, 17-18 Jan. 1984
AB Summary form only given. A power absorption analyzer specifically designed to measure the power absorbed by biological samples while they are irradiated with continuous-wave RF energy in a transverse electromagnetic (TEM) cell is described. The analyzer was designed by the National Bureau of Standards for the National Institute for Occupational Safety and Health. Its design is based on a six-port type of automatic network analyzer which makes it possible to accurately measure small amounts of absorbed power. The power absorption analyzer operates over a 100 to 1000 MHz frequency range with an input power to the TEM cell of 1 to 1000 W. It can measure absorbed power levels on the order of 0.05% of the incident power (0.002 dB in insertion loss).

L19 ANSWER 386 OF 511 BIOSIS on STN
AN 1983:77710 BIOSIS
TI ASSESSMENT OF THE IMMUNE RESPONSIVENESS OF MICE IRRADIATED WITH CONTINUOUS WAVE OR PULSE MODULATED 425 MEGAHERTZ RADIO FREQUENCY RADIATION.
AU SMIALOWICZ R J [Reprint author]; RIDDLE M M; WEIL C M; BRUGNOLOTTI P L; KINN J B
CS EXP BIOL DIV, HEATH EFFECTS RES LAB, US ENVIRON PROTECTION AGENCY, RESEARCH TRIANGLE PARK, NC 27711, USA
SO Bioelectromagnetics, (1982) Vol. 3, No. 4, pp. 467-470.

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STN INTERNATIONAL LOGOFF AT 08:31:41 ON 01 MAR 2008